

## Claims

### WE CLAIM:

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1. A method of performing server-side processing of postback input received from a client and associated with a client-side user interface element, the method comprising:

examining the postback input to determine an identifier of a target server-side control object;

5 identifying the target server-side control object based on the identifier of the target server-side control object;

passing the postback input to the target server-side control object; and

processing the postback input passed to the target server-side control object.

2. The method of claim 1 wherein the processing operation comprises changing a property of the target server-side control object; and further comprising:

generating authoring language data from the target server-side control object based on the property to define the client-side user interface element for transmission to the client.

3. The method of claim 1 wherein the processing operation comprises raising a server-side event from the target server-side control object; and further comprising:

generating authoring language data from the target server-side control object based on the server-side event to define the client-side user interface element for transmission to the

5 client.

4. The method of claim 2 further comprising:

creating a plurality of server-side control objects in a server-side control object hierarchy, prior to the operation of processing the postback input; and

terminating the plurality of server side control objects, after the operation of generating  
5 authoring language data.

5. The method of claim 2 further comprising:

searching for the target server-side control object in a server-side control hierarchy based  
on the identifier;

creating the target server-side control object in the server-side control hierarchy, if the  
5 target server-side control object is not found by the searching operation; and

terminating the server-side control hierarchy, after the operation of generating authoring  
language data.

6. The method of claim 1 wherein the identifier has a hierarchical identifier structure  
indicating a plurality of levels in a server-side control object hierarchy including a plurality of  
member server-side control objects, and the operation of identifying the target server-side  
control object comprises:

extracting a node level identifier from the identifier;

passing the node level identifier to a member server-side control object corresponding to  
the node level identifier;

identifying the member server-side control object as the target server-side control object,  
if the node level identifier identifies a leaf node of the identifier;

10 extracting a next node level identifier from the identifier of the target server-side control  
object, if the node level identifier does not identify a leaf node of the identifier, wherein the next  
node level identifier identifies a child server-side control object of the member server-side  
control object; and

performing recursively the passing and identifying operations and the operation of

15 extracting a next node level identifier using the next node level identifier as the node level identifier and the child server-side control object as the member server-side control object, if the node level identifier does not identify a leaf node of the identifier.

7. The method of claim 1 wherein the operation of processing the postback input comprises:

storing a postback data value as a property the target server-side control object.

8. The method of claim 7 wherein the target server-side control object initially stores an old data value as a property, and the operation of storing a postback data value comprises:

associating the postback data value with the property;

indicating a data change associated with the target server-side control object, if the postback data value passed to the target server-side control object is different than the old data value of target server-side control object; and

replacing the old data value with the postback data value in the target server-side control object.

9. The method of claim 8 further comprising:

raising a server-side data change event after the operation of replacing of the old data value, if a data change is indicated.

10. The method of claim 7 wherein the target server-side control object is one of a plurality of member server-side control objects in a server-side control object hierarchy, and the operation of storing a postback data value comprises:

storing postback data values for all of the member server-side control objects in the

5 server side control object hierarchy; and

raising at least one server-side data change event after the operation of storing a postback data value for all member server-side control objects, if at least one data change is indicated.

11. The method of claim 10 further comprising:

receiving the server-side data change event from the target server-side control object;

and

invoking a function of a non-user-interface server component, based on the server-side

data change event.

12. The method of claim 1 wherein the operation of processing the postback input comprises:

processing a postback event using the target server-side control object.

13. The method of claim 12 wherein the operation of processing a postback event comprises:

extracting from the postback input a postback event argument associated with the identifier;

passing the postback event argument associated with the identifier to the target server-side control object; and

processing the postback event argument using the target server-side control object.

14. The method of claim 13 wherein the operation of processing a postback input further comprises:

raising a server-side event from the target server-side control object, responsive to the operation of processing the postback event argument.

15. The method of claim 14 further comprising:

receiving the server-side event from the target server-side control object; and

invoking a function of a non-user-interface server component, based on the server-side

event.

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16. A computer data signal embodied in a carrier wave by a computing system and encoding a computer program for executing a computer process performing server-side processing of postback input received from a client and associated with a client-side user interface element, the computer process comprising:

5 examining the postback input to determine an identifier of a target server-side control object;

identifying the target server-side control object based on the identifier of the target server-side control object;

passing the postback input to the target server-side control object; and

processing the postback input passed to the target server-side control object.

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17. A computer program storage medium readable by a computer system and encoding a computer program for executing a computer process performing server-side processing of postback input received from a client and associated with a client-side user interface element, the computer process comprising:

5       examining the postback input to determine an identifier of a target server-side control object;

          identifying the target server-side control object based on the identifier of the target server-side control object;

          passing the postback input to the target server-side control object; and

          processing the postback input passed to the target server-side control object.

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18. A computer program product for processing postback input received from a client and associated with a client-side user interface element, the computer process comprising:

creating a plurality of server-side control objects in a server-side control object hierarchy, the server-side control object hierarchy including a target server-side control object associated with the client-side user interface element;

passing the postback input to the target server-side control object;

processing the postback input received by target server-side control object; and

generating authoring language data from the plurality of server-side control objects to define a web page for display on a client.

19. The computer program product of claim 18 wherein the computer process further comprises:

receiving an identifier associated with the target server-side control object; and

identifying the target server-side control object within the server-side control object hierarchy, based on the identifier.

20. The computer program product of claim 18 wherein the computer process further comprises:

terminating the plurality of server side control objects, after the operation of generating authoring language data.

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